**Software Packages for Sanskrit**

*111. SHRI PRAMOD MAHAJAN:
SHRI ASHWANI KUMAR:

Will the PRIME MINISTER be pleased to state:

(a) what are the software packages for Sanskrit available and which ones are envisaged for development during the year 1990;

(b) whether some audio and audio-visual tapes have been prepared for research purposes of the Vedic and ancient sciences, depicting recitations and related procedures; if so, the details thereof; and

(c) whether more such software packages are being envisaged to be made available for scholars and others, if so, what are the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY WITH ADDITIONAL CHARGE OF THE MINISTER OF STATE IN DEPARTMENT OF EDUCATION IN THE MINISTRY OF HUMAN RESOURCE DEVELOPMENT (PROF. M. G. K. MENON): (a) to (c) As part of the project at Centre for Development of Advanced Computing (C-DAC), Pune on the use of Sanskrit as a language for computer, some programming environments have been developed which allow all Indian scripts including Devnagri to be used in Programming. Symbolic programming languages like LISP and PROLOG can now be used for Sanskrit. In order to fully develop Paninian grammar on the computer for the purpose of investigating the use of Sanskrit for natural language processing, basic support tools, incorporating the grammar rules such as Sandhi, Vigrah, Shabdaroop and Dhaturoop have been developed using LISP. The prototype of an expert system shall called "Visheshgya" has been completed. This can be used by scholars of Sanskrit and ancient Indian sciences for entering knowledge on specific domains.

A Sanskrit Intelligent Tutoring System for Tenth Standard students has been developed which will help in the training of Sanskrit in Schools. Further software for the implementation of the rules of Paninian Grammar will be developed. Preliminary software development work done on the Sanskrit sentence Parser will be refined. Further work on Visheshgya will be undertaken.

A separate project on "Computer Assisted Sanskrit Teaching|Learning Environment" has started at Jawaharlal Nehru University, New Delhi and Lal Bahadur Shastri Kendriya Sanskrit Vidyapeeth, New Delhi. Under these, basic design of the software for teaching alphabet their properties, Sandhis have been undertaken. Also a nucleus software system has been designed which will be used in implementing the teaching|learning lessons and exercises. No audio-visual tapes have been prepared in this context for research purposes of the vedic and ancient Sciences.

**Disparity in the Forest cover as per Revenue Records and as per Satellite Picture**

*112. SHRI MURLIDHAR CHANDRAKANT BHANDARE:
DR. RATNAKAR PANDEY:

Will the PRIME MINISTER be pleased to state:

(a) what are the details of the extent of forest cover in the country as per revenue records and as per the satellite pictures;

(b) whether it is a fact that there is a vast disparity regarding the forest cover as per the revenue records and as per the satellite pictures;

(c) if so, what are the reasons therefor; and

(d) what steps are being taken for restoration of eco-balance which has been disturbed with the depredation

of forest areas, shown as such as per revenue records and which actually have ceased to be forest cover?

THE MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT AND FORESTS WITH ADDITIONAL CHARGE OF THE MINISTER OF STATE IN THE MINISTRY OF PROGRAMME IMPLEMENTATION (SHRIMATI MANEKA GANDHI): (a) to (c) The area under forests as per revenue records for the year 1982-83 was 67.16 million hectares. The extent of forest cover in the country during the period of 1981—83 as assessed by a study of the Forest Survey of India using satellite imagery was 64.20 million hectares. The difference in the two figures is due to the fact that while revenue records show legally recorded forest area, irrespective of forest cover, the satellite imagery shows only the area under forest cover irrespective of its legal status.

(d) Eco-development can be restored by protection of forest lands and reforestation of degraded forest areas.

For protection, Forest (Conservation) Act was enacted in 1980 to check diversion of forest land for non-forest purposes. The Act has been made more stringent by an Amendment of 1988. Also, the National Forest Policy, 1980 lays more emphasis on conservation of forests. There are specific provisions for protection of forests from grazing, fires and encroachment. Besides, alternative sources of energy, wood substitution and import of timber are encouraged to conserve forests. In addition, guidelines are issued to State/UT Governments from time to time for protection and conservation of forests and wildlife. Some of these relate to avoiding felling of natural forests, ban fellings in the hills above 1,000 metres and setting apart 4 per cent of the geographical area as protection area.

For afforestation, wasteland development programme is being implemented for reforestation of degraded forests lands and restoration of ecological balance.

**शिक्षा का रोजगारोन्मुखी बनाया जाना**

*113. **सरदार जगजीत सिंह अरोड़ा :**
**श्री मजेठमलानी :**

क्या प्रधान मंत्री यह बताने की कृपा करेंगे कि :

(क) क्या यह सच है कि सरकार ने शिक्षा को रोजगारोन्मुखी बनाने का निर्णय लिया था ;

(ख) यदि हां, तो गत तीन वर्षों के दौरान इस संबंध में हुई प्रगति का ब्योरा क्या है; और

(ग) इस संबंध में सरकार की भावी योजनाओं का ब्यौरा क्या है ?

**विज्ञान और प्रौद्योगिकी मंत्रालय में राज्य मंत्री साथ में मानव संसाधन विकास मंत्रालय में शिक्षा विभाग में राज्य मंत्री का अतिरिक्त प्रभार (प्रो० एम० जी० के० मेनन) :** (क) जी, हां ।

(ख) माध्यमिक शिक्षा का व्यावसायीकरण करने के लिए एक केन्द्रीय प्रायोजित योजना फरवरी, 1988 से आरम्भ की गई थी । यह परिकल्पना की जाती है कि व्यावसायिक शिक्षा से उत्तीर्ण होने वाले छात्रों को रोजगार/स्वरोजगार से सुसज्जित किया जाएगा । योजना के अन्तर्गत विभिन्न विषयों में पाठ्यक्रम आरंभ कर दिए गए हैं और इस प्रयोजनार्थ वर्ष 1987-88, 1988-89, 1989-90 के दौरान 25 राज्यों/संघ शासित प्रशासनों को 7,809 व्यावसायिक पाठ्यक्रमों के लिए 2,748 स्कूलों को शामिल करने हेतु 125.11 करोड़ रु. की राशि की केन्द्रीय सहायता दी गई थी । व्यावसायिक पाठ्यक्रमों में उत्तीर्ण होने वाले छात्रों के लिए रोजगार अवसर सुकर बनाने के लिए रोजगार क्षेत्र के साथ सम्पर्क स्थापित करने के प्रयास किए गए हैं ।